



- 1a. A construction permit covers construction activity taking place on or after the date of issuance of the permit. Even though the issuance of this permit indicates that the Illinois EPA has found that the application for the subject equipment met 35 Ill. Adm. Code 201.155, the standards of issuance of a construction permit, this permit does not cover and in no way condones or approves any construction of the subject emission units or air pollution control equipment which took place before the date of issuance of this permit.
  - b. This permit is issued based on the emission of Hazardous Air Pollutants (HAP) as listed in Section 112(b) of the Clean Air Act from the above-listed equipment being less than 10 tons/year of any single HAP and 25 tons/year of any combination of such HAPs. As a result of the conditions in this permit, the emissions of all HAPs from the above-listed equipment do not trigger the requirements of Section 112(g) of the Clean Air Act.
  - c. This permit is issued based on the construction of the six new crude oil storage tanks (tanks 254-1 254-2, 154-1, 154-2, 122-1, and 218-1), the one marine loadout operation, the one rail loadout station, and the two boilers and modifications to the existing storage tanks not constituting a new major source or major modification pursuant to Title I of the Clean Air Act, specifically the Illinois rules for Major Stationary Sources Construction and Modification, 35 Ill. Adm. Code Part 203. The source has requested that the Illinois EPA establish emission limitations and other appropriate terms and conditions in this permit that limit the emissions of Volatile Organic Material (VOM) emissions from the above-listed emission units below the levels that would trigger the applicability of these rules.
  - d. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
  - e. The operation of the equipment listed above is allowed under this construction permit for a period of 12 months after initial startup of this equipment.
2. Boiler 1 and 2 are subject to the New Source Performance Standards (NSPS) for Small Industrial - Commercial - Institutional Steam Generating Units, 40 CFR 60, Subparts A and Dc. The Illinois EPA is administering NSPS in Illinois on behalf of the United States EPA under a delegation agreement. Pursuant to 40 CFR 60.40c(a), Except as provided in 40 CFR 60.40c(d), (e), (f), and (g), the affected facility to which 40 CFR 60 Subpart Dc applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (mmBtu/hour)) or less, but greater than or equal to 2.9 MW (10 mmBtu/hour).

- 3a. Storage Tanks O-3-2, 20-4, 42-3, 42-5, 42,7, 120-1, 122-1, 154-1, 154-2, 254-1, 254-2, and 218-1 are subject to the New Source Performance Standards (NSPS) for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984, 40 CFR 60, Subparts A and Kb. The Illinois EPA is administering the NSPS in Illinois on behalf of the United States EPA under a delegation agreement. Pursuant to 40 CFR 60.110b(a), except as provided in 40 CFR 60.110b(b), the affected facility to which 40 CFR 60 Subpart Kb applies is each storage vessel with a capacity greater than or equal to 75 cubic meters (m<sup>3</sup>) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984.
- b. Pursuant to 40 CFR 60.112b(a)(1), the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m<sup>3</sup> containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa but less than 76.6 kPa or with a design capacity greater than or equal to 75 m<sup>3</sup> but less than 151 m<sup>3</sup> containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa but less than 76.6 kPa shall equip each storage vessel with one of the following:
  - i. A fixed roof in combination with an internal floating roof meeting the following specifications:
    - A. The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.
    - B. Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof:
      - I. A foam-or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam-or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank.
      - II. Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the

edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous.

- III. A mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.
- C. Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.
- D. Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.
- E. Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.
- F. Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting.
- G. Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening.
- H. Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.
- I. Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.
- ii. An external floating roof. An external floating roof means a pontoon-type or double-deck type cover that rests on the liquid surface in a vessel with no fixed roof. Each external floating roof must meet the following specifications

- A. Each external floating roof shall be equipped with a closure device between the wall of the storage vessel and the roof edge. The closure device is to consist of two seals, one above the other. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.
    - I. The primary seal shall be either a mechanical shoe seal or a liquid-mounted seal. Except as provided in 40 CFR 60.113b(b)(4), the seal shall completely cover the annular space between the edge of the floating roof and tank wall.
    - II. The secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion except as allowed in 40 CFR 60.113b(b)(4).
  - B. Except for automatic bleeder vents and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface. Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is to be equipped with a gasketed cover, seal, or lid that is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Automatic bleeder vents are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. Rim vents are to be set to open when the roof is being floated off the roof legs supports or at the manufacturer's recommended setting. Automatic bleeder vents and rim space vents are to be gasketed. Each emergency roof drain is to be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.
  - C. The roof shall be floating on the liquid at all times (i.e., off the roof leg supports) except during initial fill until the roof is lifted off leg supports and when the tank is completely emptied and subsequently refilled. The process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.
- 4a. Pursuant to 35 Ill. Adm. Code 212.123(a), no person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to 35 Ill. Adm. Code 212.122.

- b. Pursuant to 35 Ill. Adm. Code 212.123(b), the emission of smoke or other particulate matter from any such emission unit may have an opacity greater than 30 percent but not greater than 60 percent for a period or periods aggregating 8 minutes in any 60 minute period provided that such opaque emissions permitted during any 60 minute period shall occur from only one such emission unit located within a 305 meter (1000 foot) radius from the center point of any other such emission unit owned or operated by such person, and provided further that such opaque emissions permitted from each such emission unit shall be limited to 3 times in any 24 hour period.
- 5. Pursuant to 35 Ill. Adm. Code 214.301, except as further provided by 35 Ill. Adm. Code Part 214, no person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission source to exceed 2000 ppm.
- 6. Pursuant to 35 Ill. Adm. Code 216.121, no person shall cause or allow the emission of carbon monoxide (CO) into the atmosphere from any fuel combustion emission source with actual heat input greater than 2.9 MW (10 mmBtu/hour) to exceed 200 ppm, corrected to 50 percent excess air.
- 7a. Pursuant to 35 Ill. Adm. Code 219.121(b)(1), no person shall cause or allow the storage of any volatile organic liquid (VPL) with a vapor pressure of 17.24 kPa (2.5 psia) or greater at 294.3°K (70°F) or any gaseous organic material in any stationary tank, reservoir or other container of more than 151 cubic meters (40,000 gallons) capacity unless such tank, reservoir or other container is designed and equipped with a floating roof which rests on the surface of the VPL and is equipped with a closure seal or seals between the roof edge and the tank wall. Such floating roof shall not be permitted if the VPL has a vapor pressure of 86.19 kPa (12.5 psia) or greater at 294.3°K (70°F). No person shall cause or allow the emission of air contaminants into the atmosphere from any gauging or sampling devices attached to such tanks, except during sampling or maintenance operations.
- b. Pursuant to 35 Ill. Adm. Code 219.122(a), no person shall cause or allow the discharge of more than 3.6 kg/hour (8 lbs/hour) of organic material into the atmosphere during the loading of any organic material from the aggregate loading pipes of any loading area having through-put of greater than 151 cubic meters per day (40,000 gallons/day) into any railroad tank car, tank truck or trailer unless such loading area is equipped with submerged loading pipes or a device that is equally effective in controlling emissions and is approved by the Illinois EPA according to the provisions of 35 Ill. Adm. Code Part 201, and further processed consistent with 35 Ill. Adm. Code 219.108.
- c. Pursuant to 35 Ill. Adm. Code 219.122(b), no person shall cause or allow the loading of any organic material into any stationary tank having a storage capacity of greater than 946 liters (250 gallons), unless such tank is equipped with a permanent submerged loading pipe or an equivalent device approved by the Illinois EPA according to the provisions of 35 Ill. Adm. Code Part 201 or unless such tank is a

- pressure tank as described in 35 Ill. Adm. Code 219.121(a) or is fitted with a recovery system as described in 35 Ill. Adm. Code 219.121(b)(2).
- d. Pursuant to 35 Ill. Adm. Code 219.142, no person shall cause or allow the discharge of more than 32.8 ml (2 cu in) of VOL with vapor pressure of 17.24 kPa (2.5 psia) or greater at 294.3°K (70°F) into the atmosphere from any pump or compressor in any 15 minute period at standard conditions.
  - e. Pursuant to 35 Ill. Adm. Code 219.760, the requirements of 35 Ill. Adm. Code 219 Subpart GG (Marine Terminals) shall apply to sources that load or who are permitted to load gasoline or crude oil.
  - f. Pursuant to 35 Ill. Adm. Code 219.762(a), except as provided at 35 Ill. Adm. Code 219.762(c), every owner or operator of a subject marine terminal subject to the requirements of 35 Ill. Adm. Code 219 Subpart GG (Marine Terminals) shall equip each terminal with a vapor collection and control system that:
    - i. Captures the vapors displaced during the loading event and reduces overall VOM emissions by at least 95 percent by weight through the use of either a vapor combustion system or a vapor recovery system;
    - ii. Is maintained and operated so that it prevents visible liquid leaks, significant odors, and visible fumes in the liquid transfer and the vapor collection lines, and appurtenances during loading; and
    - iii. Has been certified as required by Coast Guard regulations found at 33 CFR 154.
  - 8a. This permit is issued based on the source not being subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations), 40 CFR 63 Subpart R. Pursuant to 40 CFR 63.420(a)(2), the affected source to which the provisions of 40 CFR 63 Subpart R apply is each bulk gasoline terminal, except those bulk gasoline terminals for which the owner or operator has documented and recorded to the Illinois EPA's or the USEPA's satisfaction that the facility is not a major source, or is not located within a contiguous area and under common control of a facility that is a major source, as defined in 40 CFR 63.2.
  - b. This permit is issued based on the source not being subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Marine Tank Vessel Loading Operations, 40 CFR 63 Subpart Y, because the source does not have HAP emissions greater than 10 or 25 tons and does not have a crude throughput greater than 10M barrels.
    - i. Pursuant to 40 CFR 63.560(a)(1), the provisions of 40 CFR 63 Subpart Y pertaining to the Maximum Achievable Control Technology

(MACT) standards in 40 CFR 63.562(b) and (d) are applicable to existing and new sources with emissions of 10 or 25 tons, as that term is defined in 40 CFR 63.561, except as specified in 40 CFR 63.560(d), and are applicable to new sources with emissions less than 10 and 25 tons, as that term is defined in 40 CFR 63.561, except as specified in 40 CFR 63.560(d).

- ii. Pursuant to 40 CFR 63.560(b)(2), sources with throughput less than 10 M barrels and 200 M barrels, as that term is defined in 40 CFR 63.561, are not subject to the emissions standards in 40 CFR 63.562(c) and (d).
- c. This permit is issued based upon the storage tanks at this source not being subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Organic Liquids Distribution (Non-Gasoline), 40 CFR 63 Subpart EEEE, because the organic liquids distribution (OLD) (non-gasoline) operation is not located at, or is part of, a major source of HAP emissions.
- d. This permit is issued based on Boilers 1 and 2 not being subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers Area Sources, 40 CFR 63 Subpart JJJJJJ. Pursuant to 40 CFR 63.11195(e), a gas-fired boiler as defined in 40 CFR 63 Subpart JJJJJJ are not subject to 40 CFR 63 Subpart JJJJJJ and to any requirements in 40 CFR 63 Subpart JJJJJJ. Pursuant to 40 CFR 63.11237, gas-fired boiler includes any boiler that burns gaseous fuels not combined with any solid fuels, burns liquid fuel only during periods of gas curtailment, gas supply emergencies, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year.
- 9a. Pursuant to 35 Ill. Adm. Code 219.122(c), if no odor nuisance exists the limitations of 35 Ill. Adm. Code 219.122 shall only apply to the loading of volatile organic liquid with a vapor pressure of 17.24 kPa (2.5 psia) or greater at 294.3°K (70°F).
- b. This permit is issued based on Storage Tanks O-3-2, 20-4, 42-3, 42-5, 42,7, 120-1, 122-1, 154-1, 154-2, 254-1, 254-2, 218-1, AA-8-1, AA-8-2, and T-2 not being subject to 35 Ill. Adm. Code 219.120 (Control Requirements for Storage Containers of VOL). Pursuant to 35 Ill. Adm. Code 219.119, the limitations of 35 Ill. Adm. Code 219.120 shall apply to all storage containers of volatile organic liquid (VOL) with a maximum true vapor pressure of 0.5 psia or greater in any stationary tank, reservoir, or other container of 151 cubic meters (40,000 gal) capacity or greater, except to:
  - i. Vessels storing petroleum liquids.
  - ii. Vessels with storage capacity less than 40,000 gallons must comply with 35 Ill. Adm. Code 218.129(f).

- c. This permit is issued based on Storage Tanks O-3-2, 20-4, 42-3, 42-5, 42,7, 120-1, 122-1, 154-1, 154-2, 254-1, 254-2, 218-1 O-3-2, 20-4, 42-3, 42-5, 42,7, 120-1, 122-1, 154-1, 154-2, 254-1, 254-2, and 218-1 not being subject to 35 Ill. Adm. Code 219.123(b) (Petroleum Liquid Storage Tanks). Pursuant to 35 Ill. Adm. Code 219.123(a)(5), the requirements of 35 Ill. Adm. Code 219.123(b) shall not apply to any stationary storage tank subject to new source performance standards for storage vessels of petroleum liquid, 40 CFR 60, as regulations promulgated by the U.S. Environmental Protection Agency under Section 111 of the Clean Air Act (42 USC 7411), as amended.
- 10. Pursuant to 40 CFR 60.11(d), at all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Illinois EPA or USEPA which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
- 11a. Pursuant to 35 Ill. Adm. Code 219.762(b), from May 1 to September 15, the regulatory control period, every owner or operator of a marine terminal subject to the requirements of this 35 Ill. Adm. Code 219 Subpart GG shall load gasoline or crude oil only into marine vessels that are:
  - i. Equipped with vapor collection equipment that has been certified as required by Coast Guard regulations found at 46 CFR 39;
  - ii. Connected to the vapor collection system; and
  - iii. Vapor-tight as described in the following 35 Ill. Adm. Code 219.762(b)(3)(A), (b)(3)(B), (b)(3)(C), or (b)(3)(D):
    - A. The owner or operator of the marine terminal shall load each marine vessel with a vacuum assisted vapor collection system, instrumented in such a way that the pump(s) transferring gasoline or crude oil to the marine vessel will not operate unless the vapor collection system is properly connected and properly operating.
    - B. As an alternative to 35 Ill. Adm. Code 219.762(b)(3)(A), the owner or operator of the marine terminal shall obtain documentation as described in 35 Ill. Adm. Code 219.770(b) that the marine vessel has been vapor-tightness tested within either the preceding 12 months or the preceding 14 months, if the test is being conducted as part of the Coast Guard's re-inspection of the vessel required under 46 CFR 31.10-17, using Method 21 of Part 60, Appendix A, as described in 35 Ill. Adm. Code 219.768(b).

- C. If there is no documentation of a successful leak test conducted on the marine vessel in either the preceding 12 months or in the preceding 14 months, if the test is being conducted as part of the Coast Guard's re-inspection of the vessel required under 46 CFR 31.10-17, the owner or operator of the marine terminal shall require that a leak test of the marine vessel be conducted during the final 20 percent of loading of the marine vessel or shall not load the vessel. The test shall be conducted when the marine vessel is being loaded at the maximum liquid transfer rate for that transfer operation. The owner or operator of the marine terminal shall require that the documentation described in 35 Ill. Adm. Code 219.770(b) is completed prior to departure of the vessel.
  - D. If the marine vessel has failed its most recent vapor-tightness leak test at the marine terminal, before the marine vessel can be loaded, the owner or operator of the marine terminal shall require that the owner or operator of the marine vessel provide documentation that the leaks detected during the previous vapor-tightness leak test have been repaired and that the marine vessel has been vapor-tightness tested since the leak(s) has been repaired pursuant to 35 Ill. Adm. Code 219.762(b)(3)(B).
- b. Pursuant to 35 Ill. Adm. Code 219.766, the owner or operator of a marine terminal shall comply with the requirements of 35 Ill. Adm. Code 219.445 with respect to all equipment associated with the vapor collection and control system required by 35 Ill. Adm. Code 219.762(a).
  - c. Pursuant to 35 Ill. Adm. Code 219.445 and 219.766, the owner or operator of a petroleum refinery or a marine terminal shall:
    - i. Develop a monitoring program plan consistent with the provisions of 35 Ill. Adm. Code 219.446;
    - ii. Conduct a monitoring program consistent with the provisions of 35 Ill. Adm. Code 219.447;
    - iii. Record all leaking components which have a volatile organic material concentration exceeding 10,000 ppm consistent with the provisions of 35 Ill. Adm. Code 219.448;
    - iv. Identify each component consistent with the monitoring program plan submitted pursuant to 35 Ill. Adm. Code 219.446;
    - v. Repair and retest the leaking components as soon as possible within 22 days after the leak is found, but no later than June 1 for the purposes of 35 Ill. Adm. Code 219.447(a)(1), unless the leaking components cannot be repaired until the unit is shut down for turnaround; and

- vi. Report to the Illinois EPA consistent with the provisions of 35 Ill. Adm. Code 219.449.
- 12a. In the event that the operation of this source results in an odor nuisance, the Permittee shall take appropriate and necessary actions to minimize odors, including but not limited to, changes in raw material or installation of controls, in order to eliminate the odor nuisance.
- b. The Vapor Combustion Unit associated with the Marine Loadout Operation shall be in operation at all times when the associated Marine Loadout Operation is in operation and emitting air contaminants.
  - c. The Permittee shall, in accordance with the manufacturer(s) and/or vendor(s) recommendations, perform periodic maintenance on the Vapor Combustion Unit (VCU) associated with the Marine Loadout Operation and the Vapor Combustion Unit (VCU) associated with the Railcar Loadout Station and the Truck Loading Rack such that the Vapor Combustion Units (VCU) are kept in proper working condition and not cause a violation of the Illinois Environmental Protection Act or regulations promulgated therein.
  - d. The Vapor Combustion Units (VCU) shall be designed for and operated with no visible emissions and with a flame present at all times, except during the loading of distillate product allowed in Condition 12(f) and 13(a)(ii).
  - e. This permit is issued based on the source loading only crude oil through the Marine Loadout Operation. The transfer or handling of gasoline or any volatile organic liquid through the Marine Loadout Operation will require that the Permittee first obtain a construction permit from the Illinois EPA and the demonstration of compliance with all applicable requirements.
  - f. This permit is issued based on the source loading only crude oil, natural gas condensate (NGC), and distillate fuel oil through the rail loadout operation. The transfer or handling of gasoline or any volatile organic liquid through the rail loadout operation will require that the Permittee first obtain a construction permit from the Illinois EPA and the demonstration of compliance with all applicable requirements.
  - f. The Boilers 1 and 2 shall only be operated with natural gas as the fuel. The use of any other fuel in the boilers requires that the Permittee first obtain a construction permit from the Illinois EPA and then perform stack testing to verify compliance with all applicable requirements.
- 11a. Emissions from and operation of the rail loadout operation with VCU control shall not exceed the following:
- i. Material throughput:

<u>Material</u>	Throughput	
	<u>(Gallons/Month)</u>	<u>(Gallons/Year)</u>
Crude Oil, NGC, & Distillates	6,300,000	75,600,000

ii. VOM emissions from the rail loading station:

<u>Emission Type</u>	<u>Material</u>	Emission Factor <u>(lbs/10<sup>3</sup> gal)</u>	VOM Emissions	
			<u>(Ton/Mo)</u>	<u>(Tons/Yr)</u>
Controlled (VCU)	Crude Oil & NGC	0.292	0.92	11.04
Fugitive	Crude Oil & NGC	0.1085	0.34	4.10
Fugitive	Distillates (uncontrolled)	0.014	0.05	<u>0.53</u>
			Total:	<u>15.67</u>

These limits are based on the maximum material throughput, standard emission factors (Table 5.2-5, AP-42, Fifth Edition, Volume I, July 2008), a vendor guaranteed emissions for the vapor combustion unit (VCU) of 35 mg hydrocarbons /l of product loaded with a maximum vapor flow rate to the VCU of 856 SCFM (6,400 gallons/minute) and a control efficiency of 95% for the VCU.

b. Emissions and operation of the marine loadout operation with VCU control shall not exceed the following:

i. Material throughput:

<u>Material</u>	Throughput	
	<u>(Gallons/Month)</u>	<u>(Gallons/Year)</u>
Crude Oil	113,400,000	1,360,800,000

ii. VOM emissions from the marine loading:

<u>Emission Type</u>	<u>Material</u>	Emission Factor <u>(lbs/10<sup>3</sup> gal)</u>	VOM Emissions	
			<u>(Ton/Mo)</u>	<u>(Tons/Yr)</u>
Controlled (VCU)	Crude Oil	1.05	0.72	7.20
Fugitive	Crude Oil	0.01365	0.93	<u>9.30</u>
			Total:	<u>16.50</u>

These limits are based on the maximum material throughput, emission calculated using equation 2 and 3 from AP-42 Section 5.2, CA emission factor from AP-42 (Table 5.2-3, Fifth Edition, Volume I, July 2008), a vendor guaranteed emissions for the vapor combustion unit (VCU) of 35 mg hydrocarbons /l of product loaded with a maximum vapor flow rate to the VCU of 856 SCFM (6,400 gallons/minute), a control efficiency of 99% for the VCU, and a

flare fugitive emission rate of 1.3%. Where equations 2 and 3 are as follow:

$$CL = CA + CG \text{ (Equation 2)}$$

Where:

CL = total loading losses (lbs/1,000 gallon of crude oil loaded);

CA = arrival emission factor (lbs/1,000 gallon of crude oil loaded)  
 = 0.86 lb/1,000 gal of crude oil loaded from Table 5.2-3 (AP-42), unclean barge; and

CG = general emission factor (lbs/1,000 gallon of crude oil loaded)

$$CG = 1.84(0.44P - 0.42) \text{ MG/T (Equation 3)}$$

Where:

P = true vapor pressure (3.4 psi @ 70°F from Table 7.1-2 (AP-42));

M = molecular weight of vapors (50 from Table 7.1-2 (AP-42));

G = vapor growth factor (1.02); and

T = temperature of vapors, °R (62.6°F + 460)

- c. The emissions of combustion related pollutants from the truck, rail, and marine racks loadout VCUs combined shall not exceed the following:

Loading Platform	Emission Factors		Emissions			
	CO (lb/10 <sup>3</sup> gal)	NO <sub>x</sub> (lb/10 <sup>3</sup> gal)	CO (Ton/mo)	CO (Ton/yr)	NO <sub>x</sub> (Ton/mo)	NO <sub>x</sub> (Ton/yr)
Rail Rack	0.0835	0.0334	0.32	3.16	0.13	1.26
Marine Rack	0.0835	0.0334	5.68	<u>56.81</u>	2.27	<u>22.72</u>
			Total:	<u>61.24</u>		<u>24.49</u>

These limits are based on the maximum material throughput limits in Conditions 11(a)(i) and 11(b)(i) for the loading racks, and VCUs emission factor provided by the flare manufacture.

- d. Emissions and operation of the storage tanks and roof landing events shall not exceed the following:

- i. Material throughput:

<u>Tank ID</u>	<u>Materials</u>	Throughput	
		<u>(Gal/Mo)</u>	<u>(Gal/Yr)</u>
O-3-2	Gasoline(RVP 15)	222,100	2,221,000
20-4	Gasoline(RVP 15)	1,821,456	18,214,560
42-3	Gasoline(RVP 15)	3,838,867	38,388,672
42-5	Crude Oil	5,040,000	50,400,000
42-7	Crude Oil	5,040,000	50,400,000
120-1	Crude Oil	20,160,000	201,600,000
254-1	Crude Oil	25,483,853	254,838,536
254-2	Crude Oil	25,483,853	254,838,536
154-1	Crude Oil	15,476,630	154,766,304
154-2	Crude Oil	15,476,630	154,766,304
122-1	Crude Oil	12,237,920	122,379,200
218-1	Crude Oil	21,829,040	218,290,400
AA-8-1	Diesel Additive	6,000	60,000
AA-8-2	Gasoline Additive	9,480	94,800
T-2	Transmix (Slop)	11,640	116,400

- ii. VOM emissions from the storage tanks working and breathing losses:

<u>Tank ID</u>	<u>Materials</u>	VOM Emissions	
		<u>(Tons/Month)</u>	<u>(Tons/Year)</u>
O-3-2	Gasoline(RVP 15)	0.12	1.20
20-4	Gasoline(RVP 15)	0.28	2.75
42-3	Gasoline(RVP 15)	0.36	3.60
42-5	Crude Oil	0.05	0.53
42-7	Crude Oil	0.05	0.48
120-1	Crude Oil	0.11	1.05
254-1	Crude Oil	0.25	2.47
254-2	Crude Oil	0.25	2.47
154-1	Crude Oil	0.20	2.00
154-2	Crude Oil	0.20	2.00
122-1	Crude Oil	0.19	1.86
218-1	Crude Oil	0.24	2.35
AA-8-1	Diesel Additive	0.01	0.01
AA-8-2	Gasoline Additive	0.01	0.03
T-2	Transmix (Slop)	0.05	<u>0.51</u>
		Total:	23.31

These limits are based on maximum material through and standard emission estimation formulas and factors (Section 7.1, AP 42, Fifth Edition, Volume I November 2006) or the TANKS Emissions Estimation Software (Version 4.09D, October 3, 2005).

- iii. VOM emissions from the roof landing events:

<u>Tank ID</u>	<u>Roof Landing Events (Events/Year)</u>	<u>Emission (VOM)</u>	
		<u>(Tons/Month)</u>	<u>(Tons/Year)</u>
0-3-2	2	0.10	0.96
20-4	2	0.05	0.46
42-3	2	0.11	1.08
42-5	1	0.09	0.94
42-7	1	0.09	0.86
120-1	1	0.24	2.39
254-1	1	0.42	4.14
254-2	1	0.42	4.14
154-1	1	0.26	2.56
154-2	1	0.26	2.56
122-1	1	0.21	2.05
218-1	1	0.42	4.14
		Totals:	26.28

These limits are based on maximum material throughput and AP-42 Section 7.1.3.2.2 roof landing losses involving floating roof storage tanks.

- e. Emissions from and operation of Boilers 1 & 2 shall not exceed the following limits:

- i. Natural gas usage:

<u>(mmscf/Month)</u>	<u>(mmscf/Year)</u>
19.9	199

- ii. Emissions from the combustion of natural gas:

<u>Pollutant</u>	<u>Emission Factor (lbs/mmscf)</u>	<u>Emissions</u>	
		<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>
Carbon Monoxide (CO)	84.0	1.67	16.72
Nitrogen Oxides (NO <sub>x</sub> )	100.0	1.99	19.90
Particulate Matter (PM and PM <sub>10</sub> )	7.6	0.15	1.52
Sulfur Dioxide (SO <sub>2</sub> )	0.6	0.02	0.12
Volatile Organic Material (VOM)	5.5	0.11	1.10

These limits are based on the maximum firing rate of the two boilers combined (22.7 mmBtu/hour each), a heat content of 1,000 Btu/scf for natural gas, 8,760 hours/year of operation, and standard emission factors (Tables 1.4-1 and 1.4-2, AP-42, Fifth Edition, Volume I, Supplement D, July 1998).

- f. Fugitive emissions of VOM from leaking components (i.e., loading arms, meters, pump seals, valves, flanges, compressors, etc.), vacuum trucks, and water treatment shall not exceed 0.03 ton/month and 0.32 ton/year. Fugitive VOC emissions limits are based on estimated number of equipment components and usage of API Publication 4588 (Developed for

Fugitive Emissions Factors and Emission Profiles for Petroleum Marketing).

- g. The emissions of Hazardous Air Pollutants (HAP) as listed in Section 112(b) of the Clean Air Act from this source shall be less than 0.79 tons/month and 7.9 tons/year of any single HAP and 1.99 tons/month and 19.9 tons/year of any combination of such HAPs. As a result of this condition, this permit is issued based on the emissions of all HAPs from this source not triggering the requirements of Section 112(g) of the Clean Air Act.
  - h. Compliance with the annual limits of this permit shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).
- 12a. Pursuant to 35 Ill. Adm. Code 201.282, every emission source or air pollution control equipment shall be subject to the following testing requirements for the purpose of determining the nature and quantities of specified air contaminant emissions and for the purpose of determining ground level and ambient air concentrations of such air contaminants:
- i. Testing by Owner or Operator. The Illinois EPA may require the owner or operator of the emission source or air pollution control equipment to conduct such tests in accordance with procedures adopted by the Illinois EPA, at such reasonable times as may be specified by the Illinois EPA and at the expense of the owner or operator of the emission source or air pollution control equipment. The Illinois EPA may adopt procedures detailing methods of testing and formats for reporting results of testing. Such procedures and revisions thereto, shall not become effective until filed with the Secretary of State, as required by the APA Act. All such tests shall be made by or under the direction of a person qualified by training and/or experience in the field of air pollution testing. The Illinois EPA shall have the right to observe all aspects of such tests.
  - ii. Testing by the Illinois EPA. The Illinois EPA shall have the right to conduct such tests at any time at its own expense. Upon request of the Illinois EPA, the owner or operator of the emission source or air pollution control equipment shall provide, without charge to the Illinois EPA, necessary holes in stacks or ducts and other safe and proper testing facilities, including scaffolding, but excluding instruments and sensing devices, as may be necessary.
- b. Testing required by Conditions 13 and 14 shall be performed upon a written request from the Illinois EPA by a qualified independent testing service.
13. Pursuant to 35 Ill. Adm. Code 212.110(c), upon a written notification by the Illinois EPA, the owner or operator of a particulate matter

emission unit subject to 35 Ill. Adm. Code Part 212 shall conduct the applicable testing for particulate matter emissions, opacity, or visible emissions at such person's own expense, to demonstrate compliance. Such test results shall be submitted to the Illinois EPA within thirty (30) days after conducting the test unless an alternative time for submittal is agreed to by the Illinois EPA.

- 14a. Pursuant to 35 Ill. Adm. Code 219.768(a), compliance with 35 Ill. Adm. Code 219.762(a)(2) shall be determined by visual inspection and by the leak detection methods contained in 35 Ill. Adm. Code 219.105(g).
- b. Pursuant to 35 Ill. Adm. Code 219.768(b), if the control device used to comply with 35 Ill. Adm. Code 219.762(a)(1) is a flare, compliance shall be determined by methods described in 35 Ill. Adm. Code 219.429(c).
- c. Pursuant to 35 Ill. Adm. Code 219.768(d), Compliance with 35 Ill. Adm. Code 219.762(b)(3) shall be determined by one of the methods described in 35 Ill. Adm. Code 219.768:
- i. A marine vessel loaded in accordance with 35 Ill. Adm. Code 219.762(b)(3)(A) through the use of a vacuum assisted vapor collection system is assumed to be vapor-tight for the purposes of 35 Ill. Adm. Code 219 Subpart GG.
- ii. A vapor-tightness test for marine vessels shall be conducted to include the final 20 percent of loading of each product tank of the marine vessel, and it shall be applied to any potential sources of vapor leaks on the vessel pursuant to Method 21 of 40 CFR 60, Appendix A. A reading of 10,000 ppmv or greater as methane shall constitute a leak.
- iii. As an alternative to 35 Ill. Adm. Code 219.768(d)(2), an owner or operator of a marine terminal may use the vapor-tightness test described in 40 CFR 61.304(f).
- d. Pursuant to 35 Ill. Adm. Code 219.768(e), when in the opinion of the Illinois EPA or USEPA it is necessary to conduct testing to demonstrate compliance with or verify effectiveness of the vapor collection and control system required by 35 Ill. Adm. Code 219.762(a), (c)(1), or (c)(3), the owner or operator of a marine terminal shall, at its own expense, conduct such tests in accordance with the applicable test methods and procedures specified in 35 Ill. Adm. Code 219.768(a), (b), or (c), as applicable.
- 15a. Within 180 days after achieving the maximum production rate at which the Marine Loadout Operation will be operated, the VOM emissions from the Marine Loadout Operation and opacity from the associated Vapor Combustion Unit (VCU) shall be measured during conditions which are representative of maximum emissions. These tests shall determine compliance with 40 CFR 63.562(c).

- b. The following methods and procedures shall be used for testing of emissions, unless another method is approved by the Illinois EPA: Refer to 40 CFR 60, Appendix A for USEPA test methods.

Determination of Stack Gas Velocity and Volumetric Flow Rate (Type S Pitot Tube)	USEPA Method 2
Direct Measurement of Gas Volume Through Pipes and Small Ducts	USEPA Method 2A
Determination of Gas Velocity and Volumetric Flow Rate in Small Stacks or Ducts (Standard Pitot Tube)	USEPA Method 2C
Measurement of Gas Volume Flow Rates in Small Pipes and Ducts	USEPA Method 2D
Measurement of Gaseous Organic Compound Emissions by Gas Chromatography	USEPA Method 18
Determination of Volatile Organic Compounds Leaks	USEPA Method 21
Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares	USEPA Method 22

- c. At least 30 days prior to the actual date of testing, the Permittee shall submit a written test plan to the Illinois EPA, Compliance Section. This plan shall include as a minimum:
- i. The name (or other identification) of the emission unit(s) to be tested and the name and address of the facility at which they are located;
  - ii. The name and address of the independent testing service(s) performing the tests, with the names of the individuals who may be performing sampling and analysis and their experience with similar tests;
  - iii. The specific determinations of emissions and/or performance which are intended to be made, including the site(s) in the ductwork or stack at which sampling will occur;
  - iv. The specific conditions under which testing will be performed, including a discussion of why these conditions will be representative of the maximum emissions, maximum operating rate, minimum control performance, the levels of operating parameters for the emission unit, including associated control equipment, at or within which compliance is intended to be shown, and the means by which the operating parameters will be determined;
  - v. The test method(s) which will be used, with the specific analysis method, if the method can be used with different analysis methods. The specific sampling, analytical and quality control procedures which will be used, with an identification of the standard methods upon which they are based;

- vi. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justification;
  - vii. Any proposed use of an alternative test method, with detailed justification; and
  - viii. The format and content of the Source Test Report.
- d. The Permittee shall provide the Illinois EPA with written notification of testing at least thirty (30) days prior to testing to enable the Illinois EPA to have an observer present. This notification shall include the name of emission unit(s) to be tested, scheduled date and time, and contact person with telephone number.
- e. If testing is delayed, the Permittee shall promptly notify the Illinois EPA by facsimile, at least 5 days prior to the scheduled date of testing or immediately, if the delay occurs in the 5 days prior to the scheduled date. This notification shall also include the new date and time for testing, if set, or a separate notification shall be sent with this information when it is set.
- f. The Permittee shall submit the Final Test Report(s) for these tests accompanied by a cover letter stating whether or not compliance was shown, to the Illinois EPA without delay, within 30 days after the test results are compiled, but no later than 60 days after the date of testing or sampling. The Final Test Report shall include as a minimum:
- i. General information describing the test, including the name and identification of the emission source which was tested, date of testing, names of personnel performing the tests, and Illinois EPA observers, if any;
  - ii. A summary of results;
  - iii. Description of test procedures and method(s), including description and map of emission units and sampling points, sampling train, testing and analysis equipment, and test schedule;
  - iv. Detailed description of test conditions, including:
    - A. List and description of the equipment (including serial numbers or other equipment specific identifiers) tested and process information (i.e., mode(s) of operation, process rate/throughput, fuel or raw material consumption rate, and heat content of the fuels);
    - B. Control equipment information (i.e., equipment condition and operating parameters) during testing; and
    - C. A discussion of any preparatory actions taken (i.e., inspections, maintenance and repair).

- v. Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration. Identification of the applicable regulatory standards that the testing was performed to demonstrate compliance with, a comparison of the test results to the applicable regulatory standards, and a statement whether the test(s) demonstrated compliance with the applicable standards;
  - vi. An explanation of any discrepancies among individual tests, failed tests or anomalous data;
  - vii. The results and discussion of all quality control evaluation data, including a copy of all quality control data; and
  - viii. The applicable operating parameters of the pollution control device(s) during testing (temperature, pressure drop, scrubbant flow rate, etc.), if any.
- g. Satisfactory completion of this test so as to demonstrate compliance with applicable emission standards is a prerequisite to issuance of an operating permit, pursuant to 35 Ill. Adm. Code 201.160(b).
- 16a. Pursuant to 40 CFR 60.113b(a), after installing the control equipment required to meet 40 CFR 60.112b(a)(1) (permanently affixed roof and internal floating roof), each owner or operator shall:
- i. Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel.
  - ii. For vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Illinois EPA or USEPA in the inspection report required in 40 CFR 60.115b(b)(3). Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that

the control equipment will be repaired or the vessel will be emptied as soon as possible.

- iii. For vessels equipped with a double-seal system as specified in 40 CFR 60.112b(a)(1)(ii)(B):
  - A. Visually inspect the vessel as specified in 40 CFR 60.113b(a)(4) at least every 5 years; or
  - B. Visually inspect the vessel as specified in 40 CFR 60.113b(a)(2).
- iv. Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in 40 CFR 60.113b(a)(2) and (a)(3(ii)) and at intervals no greater than 5 years in the case of vessels specified in 40 CFR 60.113b(a)(3)(i).
- b. Pursuant to 40 CFR 60.113b(b), after installing the control equipment required to meet 40 CFR 60.112b(a)(2) (external floating roof), the owner or operator shall:
  - i. Determine the gap areas and maximum gap widths, between the primary seal and the wall of the storage vessel and between the secondary seal and the wall of the storage vessel according to the following frequency.
    - A. Measurements of gaps between the tank wall and the primary seal (seal gaps) shall be performed during the hydrostatic testing of the vessel or within 60 days of the initial fill with VOL and at least once every 5 years thereafter.
    - B. Measurements of gaps between the tank wall and the secondary seal shall be performed within 60 days of the initial fill with VOL and at least once per year thereafter.
    - C. If any source ceases to store VOL for a period of 1 year or more, subsequent introduction of VOL into the vessel shall

be considered an initial fill for the purposes of 40 CFR 60.113b(b)(1)(i) and (b)(1)(ii).

- ii. Determine gap widths and areas in the primary and secondary seals individually by the following procedures:
  - A. Measure seal gaps, if any, at one or more floating roof levels when the roof is floating off the roof leg supports.
  - B. Measure seal gaps around the entire circumference of the tank in each place where a 0.32-cm diameter uniform probe passes freely (without forcing or binding against seal) between the seal and the wall of the storage vessel and measure the circumferential distance of each such location.
  - C. The total surface area of each gap described in 40 CFR 60.113b(b)(2)(ii) shall be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance.
- iii. Add the gap surface area of each gap location for the primary seal and the secondary seal individually and divide the sum for each seal by the nominal diameter of the tank and compare each ratio to the respective standards in 40 CFR 60.113b(b)(4).
- iv. Make necessary repairs or empty the storage vessel within 45 days of identification in any inspection for seals not meeting the requirements listed in 40 CFR 60.113b(b)(4) (i) and (ii):
  - A. The accumulated area of gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal shall not exceed 212 cm<sup>2</sup> per meter of tank diameter, and the width of any portion of any gap shall not exceed 3.81 cm.
    - I. One end of the mechanical shoe is to extend into the stored liquid, and the other end is to extend a minimum vertical distance of 61 cm above the stored liquid surface.
    - II. There are to be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope.
  - B. The secondary seal is to meet the following requirements:
    - I. The secondary seal is to be installed above the primary seal so that it completely covers the space between the roof edge and the tank wall except as provided in 40 CFR 60.113b(b)(2)(iii).
    - II. The accumulated area of gaps between the tank wall and the secondary seal shall not exceed 21.2 cm<sup>2</sup> per

meter of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm.

III. There are to be no holes, tears, or other openings in the seal or seal fabric.

C. If a failure that is detected during inspections required in 40 CFR 60.113b(b)(1) cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Illinois EPA or USEPA in the inspection report required in 40 CFR 60.115b(b)(4). Such extension request must include a demonstration of unavailability of alternate storage capacity and a specification of a schedule that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

v. Visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed. If the external floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before filling or refilling the storage vessel with VOL.

17a. Pursuant to 35 Ill. Adm. Code 219.446 and 219.766, the owner or operator of a petroleum refinery or a marine terminal shall prepare a monitoring program plan which contains, at a minimum:

i. An identification of all refinery or marine terminal components and the period in which each will be monitored pursuant to 35 Ill. Adm. Code 219.447;

ii. The format for the monitoring log required by 35 Ill. Adm. Code 219.448;

iii. A description of the monitoring equipment to be used pursuant to 35 Ill. Adm. Code 219.447; and

iv. A description of the methods to be used to identify all pipeline valves, pressure relief valves in gaseous service and all leaking components such that they are obvious to both refinery personnel performing monitoring and Agency personnel performing inspections.

b. Pursuant to 35 Ill. Adm. Code 219.447(a) and 219.766, the owner or operator of a petroleum refinery or a marine terminal subject to 35 Ill. Adm. Code 219.445 shall, for the purpose of detecting leaks, conduct a component monitoring program consistent with the following provisions:

- i. Test once between March 1 and June 1 of each year, by methods referenced in 35 Ill. Adm. Code 219.105(g), all pump seals, pipeline valves in liquid service and process drains;
  - ii. Test once each quarter of each calendar year, by methods referenced in 35 Ill. Adm. Code 219.105(g), all pressure relief valves in gaseous service, pipeline valves in gaseous service and compressor seals;
  - iii. Inaccessible valves may be tested once each calendar year instead of once each quarter of each calendar year;
  - iv. Observe visually all pump seals weekly;
  - v. Test immediately any pump seal from which liquids are observed dripping;
  - vi. Test any relief valve within 24 hours after it has vented to the atmosphere; and
  - vii. Test immediately after repair any component that was found leaking.
- d. Pursuant to 35 Ill. Adm. Code 219.447(b), storage tank valves and pressure relief devices connected to an operating flare header or vapor recovery device are exempt from the monitoring requirements in 35 Ill. Adm. Code 219.447(a).
- e. Pursuant to 35 Ill. Adm. Code 219.447(c), the Illinois EPA may require more frequent monitoring than would otherwise be required by 35 Ill. Adm. Code 219.447(a) for components which are demonstrated to have a history of leaking.
- 18a. Pursuant to 40 CFR 60.7(b), any owner or operator subject to the provisions of 40 CFR Part 60 shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.
- b. Pursuant to 40 CFR 60.7(f), any owner or operator subject to the provisions of 40 CFR Part 60 shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR Part 60 recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records.

- 19a. i. Pursuant to 40 CFR 60.48c(g)(1), except as provided under 40 CFR 60.48c(g)(2) and (g)(3), the owner or operator of each affected facility shall record and maintain records of the amounts of each fuel combusted during each operating day.
  - ii. Pursuant to 40 CFR 60.48c(g)(2), as an alternative to meeting the requirements of 40 CFR 60.48c(g)(1), the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in 40 CFR 60.48c(f) to demonstrate compliance with the SO<sub>2</sub> standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.
  - iii. Pursuant to 40 CFR 60.48c(g)(2), as an alternative to meeting the requirements of 40 CFR 60.48c(g)(1), the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to 40 CFR 60 Subpart Dc) at that property are natural gas, wood, distillate oil meeting the most current requirements in 40 CFR 60.42c to use fuel certification to demonstrate compliance with the SO<sub>2</sub> standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.
  - b. Pursuant to 40 CFR 60.48c(i), all records required under 40 CFR 60.48 shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.
- 20a. Pursuant to 40 CFR 60.115b, the owner or operator of each storage vessel as specified in 40 CFR 60.112b(a) shall keep records and furnish reports as required by 40 CFR 60.115(a), (b), or (c) depending upon the control equipment installed to meet the requirements of 40 CFR 60.112b. The owner or operator shall keep copies of all reports and records required by 40 CFR 60.115, except for the record required by 40 CFR 60.115 (c)(1), for at least 2 years. The record required by 40 CFR 60.115(c)(1) will be kept for the life of the control equipment.
  - b. Pursuant to 40 CFR 60.115b(a)(2), after installing control equipment in accordance with 40 CFR 60.112b(a)(1) (fixed roof and internal floating roof), the owner or operator shall keep a record of each inspection performed as required by 40 CFR 60.113b(a)(1), (a)(2), (a)(3), and (a)(4). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).
  - c. Pursuant to 40 CFR 60.115b(b)(3), after installing control equipment in accordance with 40 CFR 60.112b(a)(2) (external floating roof), the

owner or operator shall keep a record of each gap measurement performed as required by 40 CFR 60.113b(b). Each record shall identify the storage vessel in which the measurement was performed and shall contain:

- i. The date of measurement.
  - ii. The raw data obtained in the measurement.
  - iii. The calculations described in 40 CFR 60.113b (b)(2) and (b)(3).
- d. Pursuant to 40 CFR 60.116b(a), the owner or operator shall keep copies of all records required by 40 CFR 60.116b, except for the record required by 40 CFR 60.116b(b), for at least 2 years. The record required by 40 CFR 60.116b(b) will be kept for the life of the source.
  - e. Pursuant to 40 CFR 60.116b(b), the owner or operator of each storage vessel as specified in 40 CFR 60.110b(a) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.
  - f. Pursuant to 40 CFR 60.116b(c), except as provided in 40 CFR 60.116b(f) and (g), the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m<sup>3</sup> storing a liquid with a maximum true vapor pressure greater than or equal to 3.5 kPa or with a design capacity greater than or equal to 75 m<sup>3</sup> but less than 151 m<sup>3</sup> storing a liquid with a maximum true vapor pressure greater than or equal to 15.0 kPa shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.
21. Pursuant to 40 CFR 63.10(b)(3), if an owner or operator determines that his or her stationary source that emits (or has the potential to emit, without considering controls) one or more hazardous air pollutants regulated by any standard established pursuant to Section 112(d) or (f) of the Clean Air Act, and that stationary source is in the source category regulated by the relevant standard, but that source is not subject to the relevant standard (or other requirement established under 40 CFR Part 63) because of limitations on the source's potential to emit or an exclusion, the owner or operator must keep a record of the applicability determination on site at the source for a period of 5 years after the determination, or until the source changes its operations to become an affected source, whichever comes first. The record of the applicability determination must be signed by the person making the determination and include an analysis (or other information) that demonstrates why the owner or operator believes the source is unaffected (e.g., because the source is an area source). The analysis (or other information) must be sufficiently detailed to allow the USEPA and/or Illinois EPA to make a finding about the source's applicability status with regard to the relevant standard or other requirement. If relevant, the analysis must be performed in accordance with requirements established in relevant subparts of 40 CFR Part 63 for

this purpose for particular categories of stationary sources. If relevant, the analysis should be performed in accordance with USEPA guidance materials published to assist sources in making applicability determinations under Section 112 of the Clean Air Act, if any. The requirements to determine applicability of a standard under 40 CFR 63.1(b)(3) and to record the results of that determination under 40 CFR 63.10(b)(3) shall not by themselves create an obligation for the owner or operator to obtain a Title V permit.

22. Pursuant to 35 Ill. Adm. Code 212.110(e), the owner or operator of an emission unit subject to 35 Ill. Adm. Code Part 212 shall retain records of all tests which are performed. These records shall be retained for at least three (3) years after the date a test is performed.
- 23a. Pursuant to 35 Ill. Adm. Code 219.129(f), the owner or operator of each storage vessel specified in 35 Ill. Adm. Code 219.119 shall maintain readily accessible records of the dimension of the storage vessel and an analysis of the capacity of the storage vessel. Each storage vessel with a design capacity less than 40,000 gallons is subject to no provision of 35 Ill. Adm. Code Part 219 other than those required by maintaining readily accessible records of the dimensions of the storage vessel and analysis of the capacity of the storage vessel.
- b. Pursuant to 35 Ill. Adm. Code 219.448(a) and 219.766, the owner or operator of a petroleum refinery or a marine terminal shall maintain a leaking components monitoring log which shall contain, at a minimum, the following information:
  - i. The name of the process unit where the component is located;
  - ii. The type of component (e.g., valve, seal);
  - iii. The identification number of the component;
  - iv. The date on which a leaking component is discovered;
  - v. The date on which a leaking component is repaired;
  - vi. The date and instrument reading of the recheck procedure after a leaking component is repaired;
  - vii. A record of the calibration of the monitoring instrument;
  - viii. The identification number of leaking components which cannot be repaired until turnaround; and
  - ix. The total number of components inspected and the total number of components found leaking during that monitoring period.

- c. Pursuant to 35 Ill. Adm. Code 219.448(b), copies of the monitoring log shall be retained by the owner or operator for a minimum of two years after the date on which the record was made or the report prepared.
- d. Pursuant to 35 Ill. Adm. Code 219.448(c), copies of the monitoring log shall be made available to the Illinois EPA, upon verbal or written request, at any reasonable time.
- e. Pursuant to 35 Ill. Adm. Code 219.770(a), the owner or operator of sources complying with 35 Ill. Adm. Code 219.762(a) and (b), or (c)(1), or (c)(3) shall maintain records regarding the marine terminal, and each time a marine vessel is loaded during the regulatory control period. The records shall include but are not limited to:
  - i. The date(s) and the time(s) at which the marine vessel was loaded from the marine terminal;
  - ii. The name, type, identification number, and owner of the vessel loaded;
  - iii. The type and amount of liquid loaded into the marine vessel;
  - iv. Records of any leaks found, repair attempts, and the results of the required fugitive monitoring and maintenance program, including appropriate dates, test methods, instrument readings, repair results, and corrective action taken as required by 35 Ill. Adm. Code 219.762(a)(2) and 219.766;
  - v. A copy of the Coast Guard certification demonstrating that the marine terminal's vapor collection and control system has been certified as required by Coast Guard regulations found at 33 CFR 154; and
  - vi. A copy of the Coast Guard certification demonstrating that the marine vessel has been inspected and certified as required by Coast Guard regulations found at 46 CFR 39. If a copy of the Coast Guard certificate is not available at the time of loading, then the date that the marine vessel was last inspected and the authorization that the marine vessel has functioning vapor control equipment must be recorded from the certificate. Further, a copy of the certificate must be obtained by the owner or operator of the marine terminal within 21 days after the loading event.
- f. Pursuant to 35 Ill. Adm. Code 219.770(b), owners or operators complying with 35 Ill. Adm. Code 219.762(b)(3)(B), (b)(3)(C), or (b)(3)(D) shall additionally maintain the following records concerning the vapor-tightness of the marine vessel:
  - i. Test title;
  - ii. Owner of the marine vessel tested;

- iii. The identification number of the marine vessel tested;
  - iv. Testing location;
  - v. Tester name and signature;
  - vi. Witnessing inspector, name, signature, and affiliation; and
  - vii. Test results.
- g. Pursuant to 35 Ill. Adm. Code 219.770(d), owners or operators certifying compliance under 35 Ill. Adm. Code 219.764(c) shall maintain the records specified in 35 Ill. Adm. Code 219.770(a)(1), (a)(2), and (a)(3).
- h. Pursuant to 35 Ill. Adm. Code 219.770(e), all records required by 35 Ill. Adm. Code 219.770(a), (b), (c), and (d) shall be maintained for at least three years and shall be made available to the Illinois EPA upon request.
- 24a. The Permittee shall maintain records of the following items so as to demonstrate compliance with the conditions of this permit:
- i. Records addressing use of good operating practices for the Vapor Combustion Unit (VCU) associated with the Marine Loadout Operation and the Vapor Combustion Unit (VCU) associated with the Railcar Loadout Station and the Truck Loading Rack:
    - A. Records for periodic inspection of the Vapor Combustion Units (VCU) with date, individual performing the inspection, and nature of inspection; and
    - B. Records for prompt repair of defects, with identification and description of defect, effect on emissions, date identified, date repaired, and nature of repair.
  - ii. Natural gas usage for the Boilers 1 and 2 (mmscf/month and mmscf/year);
  - iii. The throughput of each type of material through the loading racks (gallons/month and gallons/year);
  - iv. The throughput of each type of material stored and in which storage tank (gallons/month and gallons/year); and
  - v. Monthly and annual emissions of CO, NO<sub>x</sub>, SO<sub>2</sub>, PM, VOM and HAPs from the storage tanks, the one marine loadout operation, the rail loadout station, and the two boilers with supporting calculations (tons/month and tons/year).

- b. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least five (5) years from the date of entry and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request. Any records retained in an electronic format (e.g., computer storage device) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA or USEPA request for records during the course of a source inspection.
- 25a. Pursuant to 40 CFR 60.7(a), any owner or operator subject to the provisions of 40 CFR Part 60 shall furnish the Illinois EPA or USEPA written notification or, if acceptable to both the Illinois EPA and USEPA and the owner or operator of a source, electronic notification, as follows:
- i. A notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.
  - ii. A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 40 CFR 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Illinois EPA or USEPA may request additional relevant information subsequent to this notice.
26. Pursuant to 40 CFR 60.48c(j), the reporting period for the reports required under 40 CFR 60 Subpart Dc is each six-month period. All reports shall be submitted to the Illinois EPA or USEPA and shall be postmarked by the 30th day following the end of the reporting period.
- 27a. Pursuant to 40 CFR 60.113b(a)(5), after installing the control equipment required to meet 40 CFR 60.112b(a)(1) (permanently affixed roof and internal floating roof), each owner or operator shall notify the Illinois EPA or USEPA in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by 40 CFR 60.113b(a)(1) and (a)(4) to afford the Illinois EPA or USEPA the opportunity to have an observer present. If the inspection required by 40 CFR 60.113b(a)(4) is not planned and the owner or operator could not have known about the inspection 30 days in advance or refilling the tank, the owner or operator shall notify the Illinois EPA or USEPA at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Illinois EPA or USEPA at least 7 days prior to the refilling.

- b. Pursuant to 40 CFR 60.113b(b)(5), after installing the control equipment required to meet 40 CFR 60.112b(a)(2) (external floating roof), the owner or operator shall notify the Illinois EPA or USEPA 30 days in advance of any gap measurements required by 40 CFR 60.113b(b)(1) to afford the Illinois EPA or USEPA the opportunity to have an observer present.
- c. Pursuant to 40 CFR 60.113b(b)(6)(ii), for all the inspections required by 40 CFR 60.113b(b)(6), the owner or operator shall notify the Illinois EPA or USEPA in writing at least 30 days prior to the filling or refilling of each storage vessel to afford the Illinois EPA or USEPA the opportunity to inspect the storage vessel prior to refilling. If the inspection required by 40 CFR 60.113b(b)(6) is not planned and the owner or operator could not have known about the inspection 30 days in advance of refilling the tank, the owner or operator shall notify the Illinois EPA or USEPA at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Illinois EPA or USEPA at least 7 days prior to the refilling.
- d. Pursuant to 40 CFR 60.115b(a), after installing control equipment in accordance with 40 CFR 60.112b(a)(1) (fixed roof and internal floating roof), the owner or operator shall meet the following requirements.
  - i. Furnish the Illinois EPA or USEPA with a report that describes the control equipment and certifies that the control equipment meets the specifications of 40 CFR 60.112b(a)(1) and 40 CFR 60.113b(a)(1). This report shall be an attachment to the notification required by 40 CFR 60.7(a)(3).
  - ii. If any of the conditions described in 40 CFR 60.113b(a)(2) are detected during the annual visual inspection required by 40 CFR 60.113b(a)(2), a report shall be furnished to the Illinois EPA or USEPA within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made.
  - iii. After each inspection required by 40 CFR 60.113b(a)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in 40 CFR 60.113b(a)(3)(ii), a report shall be furnished to the Illinois EPA or USEPA within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of 40 CFR 60.112b(a)(1) or 40 CFR 60.113b(a)(3) and list each repair made.

- e. Pursuant to 40 CFR 60.115b(b), after installing control equipment in accordance with §61.112b(a)(2) (external floating roof), the owner or operator shall meet the following requirements.
  - i. Furnish the Illinois EPA or USEPA with a report that describes the control equipment and certifies that the control equipment meets the specifications of 40 CFR 60.112b(a)(2) and 40 CFR 60.113b(b)(2), (b)(3), and (b)(4). This report shall be an attachment to the notification required by 40 CFR 60.7(a)(3).
  - ii. Within 60 days of performing the seal gap measurements required by 40 CFR 60.113b(b)(1), furnish the Illinois EPA or USEPA with a report that contains:
    - A. The date of measurement.
    - B. The raw data obtained in the measurement.
    - C. The calculations described in 40 CFR 60.113b(b)(2) and (b)(3).
  - iii. After each seal gap measurement that detects gaps exceeding the limitations specified by 40 CFR 60.113b(b)(4), submit a report to the Illinois EPA or USEPA within 30 days of the inspection. The report will identify the vessel and contain the information specified in 40 CFR 60.115b(b)(2) and the date the vessel was emptied or the repairs made and date of repair.
- f. Pursuant to 40 CFR 60.116b(d), except as provided in 40 CFR 60.116b(g), the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m<sup>3</sup> storing a liquid with a maximum true vapor pressure that is normally less than 5.2 kPa or with a design capacity greater than or equal to 75 m<sup>3</sup> but less than 151 m<sup>3</sup> storing a liquid with a maximum true vapor pressure that is normally less than 27.6 kPa shall notify the Illinois EPA or USEPA within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range.
- 28. Pursuant to 35 Ill. Adm. Code 212.110(d), a person planning to conduct testing for particulate matter emissions to demonstrate compliance shall give written notice to the Illinois EPA of that intent. Such notification shall be given at least thirty (30) days prior to the initiation of the test unless a shorter period is agreed to by the Illinois EPA. Such notification shall state the specific test methods from 35 Ill. Adm. Code 212.110 that will be used.
- 29a. Pursuant to 35 Ill Adm. Code 219.449 and 219.766, the owner or operator of a petroleum refinery or a marine terminal shall:
  - i. Submit a report to the Illinois EPA prior to the 1st day of both July and September listing all leaking components identified pursuant to 35 Ill. Adm. Code 219.447 but not repaired within 22

days, all leaking components awaiting unit turnaround, the total number of components inspected and the total number of components found leaking; and

- ii. Submit a signed statement with the report attesting that all monitoring and repairs were performed as required under 35 Ill. Adm. Code 219.445 through 219.448.
  - b. Pursuant to 35 Ill. Adm. Code 219.768(f), an owner or operator of a marine terminal planning to conduct a VOM emissions test to demonstrate compliance with 35 Ill. Adm. Code 219.762(a), (c)(1), or (c)(3) shall notify the Illinois EPA of that intent not less than 30 days before the planned initiation of the tests so that the Illinois EPA may observe the test.
- 30a. If there is an exceedance of or a deviation from the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance or deviation. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or deviation and efforts to reduce emissions and future occurrences.
- b. Two (2) copies of required reports and notifications shall be sent to:

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
Compliance Section (#40)  
P.O. Box 19276  
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
2009 Mall Street  
Collinsville, Illinois 62234

The OPERATING permit application is DENIED because the Illinois Environmental Protection Act, Sections 9 and 39, and 35 Ill. Adm. Code 201.160(b) might be violated.

Pursuant to 35 Ill. Adm. Code 201.160(b), an operating permit may not be issued until the equipment has been constructed or modified in accordance with applicable conditions in this construction permit. The Illinois EPA suggests that you reapply for the operating permit after the construction and NSPS testing are successfully completed in accordance with this permit. This information must be submitted in triplicate and should reference the application and I.D. numbers assigned above.

Page 34

If you have any questions on this permit, please call German Barria at 217/785-1705.

Edwin C. Bakowski, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

Date Signed: \_\_\_\_\_

ECB:GB:psj

cc: Region 3